

Daily rainfall at Weather Bureau stations between the Mississippi River and the Rocky Mountains, May 16-31, 1903.

Stations.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	Total.
Williston, N. Dak.	0.16	0.08	0.34	T.	T.	0.94	1.49	0.12	0.02		0.08		0.60	0.04			3.87
Bismarck, N. Dak.		T.	0.86	T.		0.47	1.06				0.20					0.50	3.09
Pierre, S. Dak.		0.26				0.14	0.62		0.19		0.04			0.46	T.		1.71
Rapid City, S. Dak.	0.02	0.14	0.30	0.16		0.14	0.18		T.	0.02			T.	0.12		0.16	1.24
Huron, S. Dak.				T.		0.16	0.50	0.34	0.24	0.08	0.24	0.01					1.57
Yankton, S. Dak.				0.03	T.	0.39	0.76	0.63	1.00		0.39	0.39	0.43	0.40	0.10	0.03	4.55
Miles City, Mont.		0.10	0.22	0.02		0.26	0.16	0.06					0.22				1.04
Havre, Mont.	0.02	0.96	0.44	0.64		0.06	0.88	0.28	0.06			0.04	0.02				3.40
Helena, Mont.	0.50	0.40	0.28	0.01		T.	T.	0.30		0.04		0.04					1.57
St. Paul, Minn.		T.		0.10			0.01	0.64	T.	0.62	1.04	0.24					2.65
Moorhead, Minn.		0.04	0.30	0.60			0.24	0.42	1.50								3.10
Valentine, Nebr.							0.26	0.24	T.	0.10	0.04	0.50		0.32	0.02		1.48
North Platte, Nebr.	T.						0.18	0.02		0.02	0.08	0.18		0.01	0.43	0.06	0.98
Lincoln, Nebr.		0.07	T.	0.24		0.56	0.79	0.28		1.37	1.03	0.43	0.15	1.94	1.13	0.10	8.09
Omaha, Nebr.		0.16		0.04	0.10	0.64	0.80	0.01		0.95	0.93	0.56	T.	0.52	0.40	0.10	5.21
Concordia, Kans.	0.30	0.14	0.78	0.04		0.18	1.10	0.94		0.16	0.96		1.64	3.68	0.25	0.42	10.59
Topeka, Kans.	T.			0.05		0.50	0.04	0.64	0.35	0.22	0.21	0.28	0.24	1.71	0.26	0.91	5.41
Wichita, Kans.	0.01		0.98	0.10		2.24	0.04	1.29	T.		0.22		0.22	0.82	0.02	0.26	6.17
Dodge, Kans.	0.14	0.10			0.10	0.58	0.06				0.30	0.26	0.28	0.03	0.04		1.89
Denver, Colo.	T.	T.	0.01			T.	T.	T.			0.01	T.		0.01	0.03	0.28	0.34
Pueblo, Colo.												0.06		0.22	T.		0.28
Cheyenne, Wyo.	0.10	0.06	0.10			T.	0.01		T.		T.		0.12	T.			0.39
Lander, Wyo.		0.62	T.			0.06	0.18		0.48	T.		T.		0.01	0.03		1.38
Oklahoma, Okla.	0.58	T.	.01	T.		0.02	1.25	T.	4.06		T.		0.18	3.26	0.02	T.	9.38
Fort Worth, Tex.	T.	0.01				T.		T.			T.		0.68	0.46	T.		1.15
Abilene, Tex.	T.	0.10				T.						T.					0.10
Amarillo, Tex.	T.				T.	0.54											0.54
Palestine, Tex.		0.04		T.								0.06	0.05	0.49	0.18		0.82
Taylor, Tex.		0.05		0.10	T.	T.	T.	T.	T.			T.	0.02	0.02	0.30		0.49
San Antonio, Tex.		0.55	0.01	0.02	T.	T.	0.01	T.				T.	T.		0.01		0.60
Dubuque, Iowa.		0.08	T.	T.	0.01	0.06	0.50	0.02		0.10	1.40	1.11	0.02	T.	0.34	0.12	3.76
Davenport, Iowa.			T.	T.		0.48	0.08	0.20	0.05	0.08	0.87	0.42	0.38	0.32	2.02	0.46	5.36
Des Moines, Iowa.		0.30	T.	0.04	0.02	0.06	1.38	0.12		0.18	2.08	1.38	0.06	0.94	2.52	0.30	9.38
Keokuk, Iowa.		T.	0.06	T.		0.76	0.04	0.06	1.40	0.52		0.06		T.	T.	0.38	3.28
Sioux City, Iowa.		0.02	0.72	1.08			0.88	0.24	0.02	0.01	0.47			2.27	0.42	0.08	6.21
Kansas City, Mo.		0.02		0.06	T.	0.70	0.34	0.74	0.26	0.22	T.	0.76	0.01	0.23	0.68	1.08	5.10
St. Louis, Mo.			0.16	0.04	0.40	0.06			T.	0.01	T.	0.12		0.40	T.	0.42	1.61
Springfield, Mo.	T.	0.04	0.02	0.70	1.06	0.35			0.06		T.	T.	0.20	0.80	1.54	1.66	6.43
Hannibal, Mo.		T.	0.17	0.02		0.49		0.04	1.93	0.06	T.	0.04	0.28	0.32	1.61	3.96	6.43
Fort Smith, Ark.	T.	0.03	T.	1.36	T.		T.				T.	0.22	0.02	1.96	0.12	0.44	4.15
Little Rock, Ark.	T.	T.	T.	0.54	T.							T.	1.14	0.68	0.91	T.	3.27
Shreveport, La.		T.	T.	T.								T.	0.02		T.	0.06	0.08

tion of the British Isles during the first decade of the month, and from the 13th to the 16th and 20th to the 24th barometric disturbances were central near the north of Scotland. From the 25th to the 27th the barometer was high over the British Isles.

Storms of marked severity were not reported on the North Atlantic Ocean nor on the Atlantic and Gulf coasts, the Great Lakes, and the north Pacific coast of the United States. On the California coast high northwest winds prevailed during the latter half of the month.

**BOSTON FORECAST DISTRICT.**

Except the severe drought, which prevailed throughout the month in all sections of the district, the weather of the month was uneventful. One storm warning was ordered on the 27th, which was fully justified along the middle and northern coast, and no storms or high winds occurred for which warnings were not issued.—*J. W. Smith, Forecast Official.*

**NEW ORLEANS FORECAST DISTRICT.**

The month opened unseasonably cold, with the lowest temperatures on record during the first decade of May in some parts of the district. The forecasts issued for the above conditions on the last day of April were discussed in the report for that month. The frost on the 1st and 2d materially injured cotton in some places. Truck gardens were successfully protected. Storm warnings were issued for parts of the coast on the 10th, 16th, and 28th. Brisk to high winds occurred during the displays. As a whole, the month was unusually mild.

The river continued falling slowly during the month; it was above danger line at New Orleans until the 22d and at Melville, La., at the close of the month. As the water recedes from the overflowed districts, data are being gathered relative to the extent of the overflow and damage resulting therefrom.

Efforts to close the crevasse at Hymelia, 40 miles above New Orleans, proved unsuccessful, and the work has been abandoned. The water is receding very slowly from the over-

flowed district in the vicinity of this crevasse. Full report on the high water is being prepared as rapidly as possible.—*I. M. Cline, Forecast Official.*

**CHICAGO FORECAST DISTRICT.**

The Lakes were unusually free from severe storms; the only storm of consequence occurred near the end of the month, for which warnings were sent out well in advance. No casualties of note, due to stress of weather, were reported.—*H. J. Cox, Professor of Meteorology.*

**SAN FRANCISCO FORECAST DISTRICT.**

The month was, as a whole, exceptionally dry. At San Francisco the month was the driest since 1873, and in general this is true for a large portion of the State. Taken in connection with the dry period during the latter half of April, the result was an unfavorable period for the successful maturing of crops. An interesting question also arises as to whether a progressive easterly movement of this dry period can be traced from the Pacific coast to the Rocky Mountain region and, possibly, to the great central valley. The accompanying table of total air movements shows the extended duration of high winds along the California coast. At Point Reyes Light, Cal., for a period of nine consecutive days, the total air movement recorded was 11,223 miles, or an average hourly movement exceeding 50 miles. (See the special report on a subsequent page.)

The beginning of the month was marked by a distribution of pressure similar to that shown on Chart IV, Sea Level Pressure, MONTHLY WEATHER REVIEW, May, 1902. On May 12, 1903, a depression of moderate depth passed over Washington, Vancouver Island, and British Columbia, and for a brief period the winds on the Pacific coast were from the southeast. There was a quick reversion, however, to the type of pressure distribution first described, and for the balance of the month high northwest winds prevailed with little cessation. The total air movements for the month are as follows: